AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application:

LISTING OF CLAIMS:

1. (PREVIOUSLY PRESENTED) A method of simultaneously initializing the antiferromagnetic layers in a spin valve sensor which has a free layer, two bias tabs for stabilization of said free layer, said bias tabs being comprised of a nonmagnetic layer, a ferromagnetic layer antiparallel coupled to a portion of said free layer, and a first antiferromagnetic layer adjacent to said ferromagnetic layer, said sensor additionally comprising a pinned layer exchange coupled to a second antiferromagnetic layer, comprising:

placing the sensor in an external magnetic field;

adjusting a magnitude of said external magnetic field to cause the magnetization of said ferromagnetic layer in said bias tabs to be substantially perpendicular to the direction of said external magnetic field;

heating the sensor above the blocking temperature of both of the antiferromagnetic layers; and,

cooling the sensor below the blocking temperature of both of the antiferromagnetic layers in the presence of said external magnetic field.

2. (PREVIOUSLY PRESENTED) The method as recited in claim 1, wherein the heating and cooling are performed in a single sequence.

3. (PREVIOUSLY PRESENTED) A method of simultaneously initializing the antiferromagnetic layers in a spin valve sensor which has a free layer, bias tabs for stabilization of said free layer, said bias tabs being comprised of a nonmagnetic layer, a ferromagnetic layer antiparallel coupled to a portion of said free layer, and a first antiferromagnetic layer adjacent to said ferromagnetic layer, said sensor additionally comprising a pinned layer exchange coupled to a second antiferromagnetic layer, comprising:

placing the sensor in an external magnetic field;

adjusting a magnitude of said magnetic field to cause the magnetization of said ferromagnetic layer in said bias tabs to be substantially perpendicular to the direction of said magnetic field;

heating the sensor above the blocking temperature of both of the antiferromagnetic layers; and,

cooling the sensor below the blocking temperature of both of the antiferromagnetic layers in the presence of said magnetic field,

wherein a direction of the magnetic field during the single sequence of heating and cooling is not oriented in a direction parallel to an ABS.

4. (PREVIOUSLY PRESENTED) A method of simultaneously initializing the antiferromagnetic layers in a spin valve sensor which has a free layer, bias tabs for stabilization of said free layer, said bias tabs being comprised of a nonmagnetic layer, a ferromagnetic layer antiparallel coupled to a portion of said free layer, and a first antiferromagnetic layer adjacent to said ferromagnetic layer, said sensor additionally

comprising a pinned layer exchange coupled to a second antiferromagnetic layer, comprising:

placing the sensor in an external magnetic field;

adjusting a magnitude of said magnetic field to cause the magnetization of said ferromagnetic layer in said bias tabs to be substantially perpendicular to the direction of said magnetic field;

heating the sensor above the blocking temperature of both of the antiferromagnetic layers; and,

cooling the sensor below the blocking temperature of both of the antiferromagnetic layers in the presence of said magnetic field,

wherein the magnetic field is varied from a start value to an optimum value during the single sequence of heating and cooling in the magnetic field.

5. (PREVIOUSLY PRESENTED) The method as recited in claim 4, wherein the magnetic field is increased above the optimum value and then reduced to the optimum value during the single sequence of heating and cooling in the magnetic field.

6. (PREVIOUSLY PRESENTED) The method as recited in claim 4, wherein the magnetic field is increased from a value below the optimum value to the optimum value during the single sequence of heating and cooling in the magnetic field.

7. (PREVIOUSLY PRESENTED) The method as recited in claim 1, wherein the second antiferromagnetic layer and the free layer have substantially the same width.

8. (PREVIOUSLY PRESENTED) The method as recited in claim 1, wherein the first and second antiferromagnetic layers have substantially the same composition.

9-16. (CANCELED)